

Observation of Bose-Einstein Condensation in a Dilute Atomic Vapor

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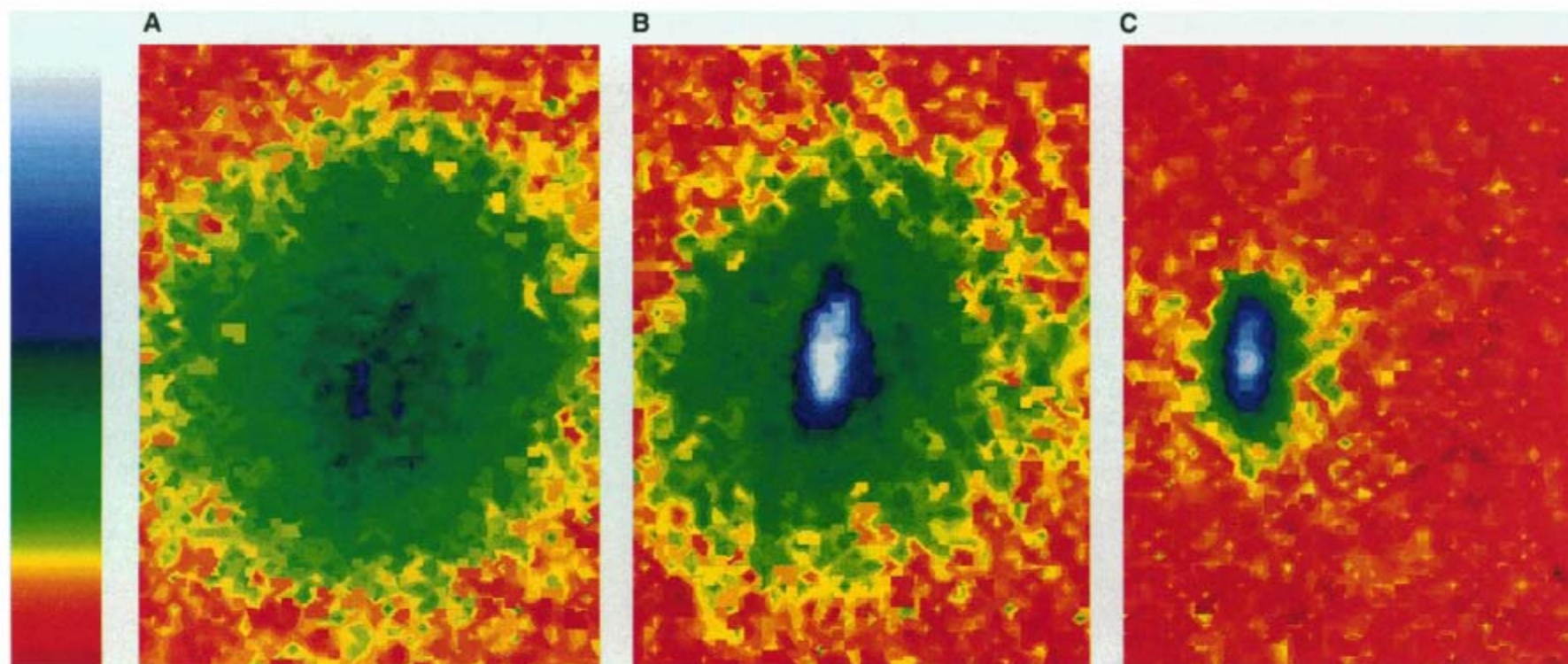


Fig. 2. False-color images display the velocity distribution of the cloud (**A**) just before the appearance of the condensate, (**B**) just after the appearance of the condensate, and (**C**) after further evaporation has left a sample of nearly pure condensate. The circular pattern of the noncondensate fraction (mostly yellow and green) is an indication that the velocity distribution is isotropic, consistent

with thermal equilibrium. The condensate fraction (mostly blue and white) is elliptical, indicative that it is a highly nonthermal distribution. The elliptical pattern is in fact an image of a single, macroscopically occupied quantum wave function. The field of view of each image is $200\ \mu\text{m}$ by $270\ \mu\text{m}$. The observed horizontal width of the condensate is broadened by the experimental resolution.